

**PATENT**  
Attorney Docket No. 223589

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Tanaka et al.

Application No. Unassigned

Group Art Unit: Unassigned

Filed: July 17, 2003

Examiner: Unassigned

For: MEMBRANE PROTEIN LIBRARY FOR  
PROTEOME ANALYSIS AND METHOD  
FOR PREPARING SAME

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Pursuant to 37 CFR 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 and/or Substitute Form PTO-1449 ("Form 1449") are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner place his or her initials in the appropriate area on the enclosed Form 1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form 1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

The Information Disclosure Statement is being filed:

- within** any one of the following time periods: (a) within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d); (b) within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 of an international application; (c) before the mailing date

of a first Office Action on the merits; or (d) before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

- after** (a), (b), (c) or (d) above, but before the mailing date of a final action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and includes *one* of:
  - the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below).
  - or*
  - the fee of \$180 set forth in 37 CFR 1.17(p) (see "Fees" below).
- after** the mailing date of a final action under 37 CFR 1.113 or a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and on or before payment of the issue fee, and includes the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).
- after** the mailing date of a Notice of Allowance under 37 CFR 1.311, and on or before payment of the issue fee, and **within** thirty days of receiving each item of information contained in the Information Disclosure Statement, and includes the Statement under 37 CFR 1.704(d) (see "Statement under 37 CFR 1.704(d)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).  
NOTE: This is for original applications except applications for a design patent, filed on or after May 29, 2000, wherein a paper containing only an Information Disclosure Statement in compliance with 37 CFR 1.97 and 1.98 is being filed.

### Copies of the References

- Copies of the references listed on the enclosed Form 1449 are enclosed herewith. Attached to each reference not in the English language is a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3). An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3).
- A copy of the foreign search report is enclosed herewith.
- The references listed on the enclosed Form 1449 were previously identified in the parent application(s) of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 CFR 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 USC 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		Status ( <i>check one</i> )		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1.				
2.				
3.				

**Statement under 37 CFR 1.97(e)**

- The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- The **undersigned** hereby states that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

**Statement under 37 CFR 1.704(d)**

- The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

**Fees**

- No fee** is owed by the applicant(s).
- The **IDS Fee of \$180** under 37 CFR 1.17(p) is enclosed herewith.

**Method of Payment of Fees**

- Attached is a check in the amount of \$ .
- Charge Deposit Account No. 12-1216 in the amount of \$ . (A duplicate copy of this communication is enclosed for that purpose.)

**Authorization to Charge Additional Fees**

- If any additional fees are owed in connection with this communication, please charge Deposit Account No. 12-1216. (A duplicate copy of this communication is enclosed for that purpose.)

In re Appln. of Tanaka et al.  
Application No. Unassigned

**Instructions as to Overpayment**

- Credit Account No. 12-1216.  
 Refund



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Date: July 17, 2003

Please type a plus sign (+) inside this box →

Substitute for form 1449A/B/PTO				<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Application Number	Unassigned
				Filing Date	July 17, 2003
				First Named Inventor	Tanaka et al.
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
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## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

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**Attorney Docket Number**

**Complete if Known**

**Application Number**

## Unassigned

**Filing Date**

July 17, 2003

## **First Named In**

Tanaka et al.

## Group Art Unit

## Unassigned

**U.S. PATENT DOCUMENTS**

U.S. PATENT DOCUMENTS						
Examiner Initials	Doc. No.	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Filing Date If Appropriate
		Application or Patent Number	Kind Code			
	AA	2001/0014461	A1	Hutchens et al.	Aug. 16, 2001	
	AB	2001/0014479	A1	Hutchens et al.	Aug. 16, 2001	
	AC	2001/0023074	A1	Hutchens et al.	Sept. 20, 2001	
	AD	2002/0037517	A1	Hutchens et al.	March 28, 2002	
	AE	2002/0123043	A1	Hutchens et al.	Sept. 5, 2002	
	AF	2002/0142343	A1	Hutchens et al.	Oct. 3, 2002	
	AG	2002/0155509	A1	Hutchens et al.	Oct. 24, 2002	
	AH	2002/0155620	A1	Hutchens et al.	Oct. 24, 2002	
	AI	2002/0177242	A1	Hutchens et al.	Nov. 28, 2002	
	AJ	2003/0044843	A1	Tanaka et al.	March 6, 2003	
	AK	2003/0129666	A1	Tanaka et al.	July 10, 2003	
	AL	4,789,734		Pierschbacher	Dec. 6, 1988	
	AM	5,595,636		Franzen	Jan. 21, 1997	
	AN	5,719,060		Hutchens et al.	Feb. 17, 1998	
	AO	5,894,063		Hutchens et al.	April 13, 1999	
	AP	6,020,208		Hutchens et al.	Feb. 1, 2000	
	AQ	6,027,942		Hutchens et al.	Feb. 22, 2000	
	AR	6,124,137		Hutchens et al.	Sept. 26, 2000	
	AS	6,225,047	B1	Hutchens et al.	May 1, 2001	
	AT	6,511,810	B2	Bi et al.	Jan. 28, 2003	
	AU	6,528,320	B2	Hutchens et al.	March 4, 2003	
	AV	6,558,744	B2	Jarrell et al.	May 6, 2003	

## **FOREIGN PATENT DOCUMENTS**

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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***Complete if Known***

Application Number	Unassigned
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Examiner Name	Unassigned
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**OTHER - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.	Translation	
			Yes	No*+
	B H	SINGH et al., "Gangliosides as Receptors for Biological Toxins: Development of Sensitive Fluoroimmunoassays Using Ganglioside-Bearing Liposomes," <i>Analytical Chemistry</i> , 72 (24), 6019-6024 (December 15, 2000)		
	B I	BANERJEE et al., "Proteoliposome as the Model for the Study of Membrane-Bound Enzymes and Transport Proteins," <i>Molecular and Cellular Biochemistry</i> , 50, 3-15 (1983)		
	B J	DALENÇON et al., "Liposomes Bearing Platelet Proteins: A Model for Surface Functions Studies," <i>Biochimica et Biophysica Acta</i> , 1302, 241-248 (1996)		
	B K	SUZUKI et al., "Mechanism of Selective Release of Membrane Proteins from Human Erythrocytes in the Presence of Liposomes," <i>Archives of Biochemistry and Biophysics</i> , 379 (2), 344-352 (July 15, 2000)		
	B L	SHINGLES et al., "Production of Membrane Vesicles by Extrusion: Size Distribution, Enzyme Activity, and Orientation of Plasma Membrane and Chloroplast Inner-Envelope Membrane Vesicles," <i>Analytical Biochemistry</i> , 229, 92-98 (1995)		
	B M	TRAINI et al., "Towards an Automated Approach for Protein Identification in Proteome Projects," <i>Electrophoresis</i> , 19, 1941-1949 (1998)		
	B N	SCHREINER et al., "Ultraviolet Matrix Assisted Laser Desorption Ionization-Mass Spectrometry of Electroblotted Proteins," <i>Electrophoresis</i> , 17, 954-961 (1996)		
	B O	LOO et al., "Diffusive Transfer to Membranes as an Effective Interface Between Gel Electrophoresis and Mass Spectrometry," <i>International Journal of Mass Spectrometry and Ion Processes</i> , 169/170, 273-290 (1997)		
	B P	KLARSKOV et al., "India Ink Staining After Sodium Dodecyl Sulfate Polyacrylamide Gel Electrophoresis and in Conjunction with Western Blots for Peptide Mapping by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry," <i>Rapid Communication in Mass Spectrometry</i> , 16, 35-42 (2002)		
	B Q	ECHERSKORN et al., "Analysis of Proteins by Direct-Scanning Infrared-MALDI Mass Spectrometry after 2D-PAGE Separation and Electroblotting," <i>Anal. Chem.</i> , 69, 2888-2892 (1997)		
	B R	BIENVENUT et al., "Toward a Clinical Molecular Scanner for Proteome Research: Parallel Protein Chemical Processing before and during Western Blot," <i>Analytical Chemistry</i> , 71 (21), 4800-4807 (November 1, 1999)		
	B S	BINZ et al., "A Molecular Scanner to Automate Proteomic Research and to Display Proteome Images," <i>Analytical Chemistry</i> , 71 (21), 4981-4988 (November 1, 1999)		
	B T	OKUMURA et al., "Transfer of Membrane Proteins from Human Platelets to Liposomal Fraction by Interaction with Liposomes Containing an Artificial Boundary Lipid," <i>Biochimica et Biophysica Acta</i> , 1194, 335-340 (1994)		
	B U	MIRZABEKOV et al., "Paramagnetic Proteoliposomes Containing a Pure, Native, and Oriented Seven-Transmembrane Segment Protein, CCR5," <i>Nature Biotechnology</i> , 18, 649-654 (2000)		
	B V	HAN et al., "Quantum-dot-tagged microbeads for multiplexed optical coding of biomolecules," <i>Nature Biotechnology</i> , 19, 631-635 (July 2001)		
	B W	FULTON et al., "Advanced multiplexed analysis with the FlowMetrix system," <i>Clinical Chemistry</i> , 43 (9), 1749-1756 (1997)		
	B X	FUNG et al., "Protein biochips for differential profiling," <i>Analytical Biotechnology</i> , 12, 65-69 (2001)		
	B Y	ZHOU et al., "Solution and chip arrays in protein profiling," <i>TRENDS in Biotechnology</i> , 19 (10 – Suppl.), S34-S39 (October 2001)		
	B Z	GYGI et al., "Quantitative analysis of complex protein mixtures using isotope-coded affinity tags," <i>Nature Biotechnology</i> , 17, 994-999 (October 1999)		

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*(Use as many sheets as necessary)*

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<i><b>Complete if Known</b></i>	
Application Number	Unassigned
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Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	223589

**OTHER - NON PATENT LITERATURE DOCUMENTS**

Examiner Signature \_\_\_\_\_ Date Considered \_\_\_\_\_

\* A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).

- + An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).